

REMARKS

This Amendment is in response to the Final Office Action mailed April 14, 2009. In the Final Office Action, claims 13 and 15-17 have been rejected and claims 21-25 have been withdrawn from consideration as being directed to a non-elected invention. Reconsideration in light of the remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 13 and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,301,926 issued to Dietrich, et al. ("Dietrich") in view of U.S. Patent No. 7,079,850 issued to Cameron ("Cameron"). Applicants respectfully traverse the rejection because a *prima facie* case of obviousness has not been established.

To establish a *prima facie* case of obviousness, certain basic criteria must be met. For instance, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. See MPEP §2143. Applicant respectfully submits that the combined teachings do not address each and every limitation, and thus no *prima facie* case of obviousness has been established.

Furthermore, the Supreme Court in Graham v. John Deere, 383 U.S. 1, 148 USPQ 459 (1966), stated: "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." See MPEP 2141. In KSR International Co. vs. Teleflex, Inc., 127 S.Ct. 1727 (2007) (Kennedy, J.), the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *Emphasis Added*. The Court further required that an explicit analysis for this reason must be made. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness.” KSR, 127 S.Ct. at 1741, quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006). In the instant case, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and there is no apparent reason to combine the known elements in the manner as claimed, and thus no *prima facie* case of obviousness has been established.

Dietrich and Cameron, taken alone or in any combination, do not disclose or render obvious, at least one of: (1) placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold; and (2) removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold, as recited in claim 13.

Dietrich merely discloses the central control element 80 including a stats collector 84 which maintains a *histrogram of signal strength* on a per-access-element basis based on the signal strength information (Dietrich, col. 8, lines 51-58, Figure 4). After the client histogram for an access element is computed, coverage analysis module 80 then determines whether the level of coverage reflected by the histogram meets a minimum coverage profile configured by a network administrator. The minimum coverage profile specifies what percentage of the histogram samples should be above a specified threshold level (e.g., received signal strength, SNR, etc.). For example, a network administrator may specify that 95% of the estimated client samples should be above -70 dBm (Dietrich, col. 9, lines 53-62). The central control element 24 transmits a notification to the network administrator if the minimum coverage profile is violated (Dietrich, col. 9, lines 64-66).

In contrast, claim 13 recites “placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold.” Applicant respectfully submits that transmitting a notification that the minimum coverage profile is violated is not the same as “placing an address of the station into a list identifying stations located in a potential coverage hole.” Accordingly, Dietrich fails to teach this element of the claim 13.

Moreover, Dietrich merely discloses that coverage analysis as to each access element may be based on percentage of mobile stations below a threshold signal strength level. Stats collector 84 maintains, for each access element, a list of identifiers (e.g., MAC addresses) of the remote client elements that have established wireless connections. Stats collector 84, as to each mobile station identifier in the list, maintains the detected signal strength values associated with each packet corresponding to the remote client elements (Dietrich, col. 10, lines 7-16). By placing all the remote client elements for each access element in the list in Dietrich, this list does not only include “stations located in a potential coverage hole.” Accordingly, the list in Dietrich identifies the remote client elements for each access element and thus, cannot be “a list identifying stations located in a potential coverage hole”, as recited in claim 13.

Additionally, since claim 13 recites “placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold” and “removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold,” the list pertains identifies stations located in a potential coverage hole and not all stations.

In the Final Office Action, the Examiner alleges that the stats collector 84 maintains a list for each mobile station identifier and their corresponding signal strengths below a threshold signal level (Final Office Action, page 2-3) such that Dietrich teaches “placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold”, as recited in claim 13. Applicant respectfully disagrees.

Contrary to that alleged by the Examiner, the list in Dietrich does not solely include mobile station identifiers having signal strengths below the threshold signal level. Instead, the stats collector 84 maintains, for each access point, a list of identifiers of the remote client elements that have established wireless connections and to each mobile station identifier in the list, maintains the detected signal strength values associated with each packet corresponding to the remote client elements (Dietrich, col. 10, lines 10-16). Thus, in Dietrich, the list maintained by the stats collector 84 includes all of the mobiles stations that have an established wireless

connection to each access point. A list containing all of the mobile stations and their associated signal strengths is not the same as “a list identifying stations located in a potential coverage hole.”

Moreover, Dietrich merely discloses that coverage analysis as to each access element is based on percentage of mobile stations below a threshold signal strength level (Dietrich, col. 10, lines 7-9). The Examiner alleges that the threshold signal strength level corresponds to the second RSSI threshold. Applicant respectfully disagrees because, even assuming that the threshold signal strength level corresponds to the second RSSI threshold, the stats collector 84 maintain the identifiers for each mobile station having a wireless connection in the list (Dietrich, col. 10, lines 7-13) and not only the mobile stations having recorded signal below the threshold signal strength level, allegedly the second RSSI threshold.

Additionally, in Dietrich, the coverage analysis is a determination of the percentage of mobile stations below a threshold signal strength level (Dietrich, col. 10, lines 7-13). Accordingly, the stats collector 84 maintains a list of all of the mobile stations having wireless connection (i.e., total number of mobile stations), in order for a determination to be made of the number of mobile stations below the threshold signal strength level and further, the percentage of mobile stations below the threshold signal strength (i.e., $\text{percentage} = \text{number of mobile stations below threshold} / \text{total number of mobile stations}$).

Furthermore, Dietrich states that the stats collector 84 creates a new mobile station entry when it determines that a received packet is associated with a new mobile station having a wireless connection and deletes the entries where no activity has been detected (i.e., no wireless connection). Prior to adding or deleting the mobile station identifiers from the list, there is no analysis of the signal strength of the new mobile station or the deleted mobile station with respect to the threshold signal strength level, which the Examiner alleges to be the “second RSSI threshold.” Therefore, the list maintained by the stats collector merely includes all the mobile stations have wireless connection regardless of whether their signal strength is or is not “above the second RSSI threshold.”

In the Final Office Action, the Examiner states that “the stats collector maintains a list of signal strengths... and the RSSI can be used in determining the existence of coverage holes in a wireless network environment (Final Office Action, page 3). Applicant respectfully submits that even if the RSSI can be used to determine coverage holes, there is no teaching in Dietrich of a “placing an address of the station into a list identifying stations located in a potential coverage hole if none of the plurality of access points computes a RSSI value of the management message above the second RSSI threshold”, as discussed above.

In the Final Office Action, the Examiner further states “see Figure 5a, when the same mobile is detected then an updated signal strength is recorded and updated in the stats collector and if it is not below threshold, it is not considered as an impact to the coverage hole” (Final Office Action, page 3) such that the Examiner alleges that Dietrich discloses “removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold”, as recited in claim 13. Applicant respectfully disagrees and submits that the Examiner misconstrues the teachings of Dietrich and the language of the claims.

In Figure 5a, Dietrich merely illustrates the stats collector 84, when it receives a data packet 102, determines whether the packet is associated with a new mobile station 104 (a mobile station having a wireless connection which is not in its list) and if so, creates a new mobile station entry. The stats collector 84 records the signal strength value of the new mobile station, or updates the signal strength value of the existing mobile station (108) (Dietrich, col. 10, lines 17-26; figure 5A). Thus, the stats collector 84 is updating its list of all mobile stations having a wireless connection and corresponding signal strength. The identifier of the mobile station will be added to list regardless of whether the signal strength recorded is above or below the threshold such that the Examiner allegation that “if it is not below threshold, it is not considered as an impact to the coverage hole” does not change that the list maintained by the stats collector in 84 is not “a list identifying stations located in a potential coverage hole,” as recited in claim 13.

In addition, in the Final Office Action, the Examiner cites portions of the Dietrich which allegedly disclose “the coverage analysis module detects signal strengths of the mobile stations and determines that the average signal strengths is less than a threshold level”, and “the coverage

analysis module issues a notification to increase transmit power of the associated access element, so the next coverage module receives signal strengths of the mobile station, the average signal strength would not be violating a threshold of the minimum coverage profile" (Final Office Action, page 3-4). There is no teaching in these cited portions of Dietrich of "a list identifying stations located in a potential coverage hole..."

Further, Dietrich merely discloses, in one embodiment, the stats collector 84 generating a delimited list of the MAC addresses of the remote client elements. Assuming a coverage profile violation is detected as to a given access element, central control elements against the high profile user list are used to determine whether a notification should be issued (Dietrich, col. 11, lines 4-15). The Examiner contends that the delimited list is based on the minimum coverage profile (Final Office Action, page 4) such that the list identifies stations located in a potential coverage hole.

Applicant respectfully disagrees and submits that there is no teaching that the delimited list only contains "stations located in a potential coverage." Moreover, even if the delimited list is based on the minimum coverage profile, the minimum coverage profile merely "specifies what percentage of the histogram samples should be above a specified threshold. For example, a network administrator may specify 95% of the samples must be above -70dBm" (Dietrich, col. 9, lines 57-62). The coverage analysis module 80 can base its determination of whether the coverage level detected meets the minimum coverage profile (Dietrich, col. 9, lines 53-57). Thus, the minimum coverage profile is a benchmark of coverage. Given this benchmark (ex: 95% of the samples must be above -70dBm), it would be a leap of logic to assume that the delimited list only contains mobile station MAC addresses which are not in a coverage hole.

Furthermore, Dietrich merely discloses that a separate process scans the list of mobile station identifiers and deletes the entries where no activity has been detected after a threshold period of time as to that access element. (Dietrich, col. 10, lines 26-29). In contrast, as discussed above, the list identifies "stations located in a potential coverage hole" in the present invention and claim 13 states "removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold."

Applicant respectfully submits that stations where no activity has been detected are more likely to be in a potential coverage hole. Since Dietrich teaches deleting the entries for these stations wherein no activity has been detected from the list while the present invention teaches maintaining a list identifying stations located in a potential coverage hole, Dietrich, in fact, teaches away from the present invention. Moreover, as stated in the Final Office Action, rather than removing from the list the addresses of the stations which are not located in a potential coverage hole, the Examiner admits that the mobile station where no activity has been detected for a period of time (due to mobile station being in a hole, or turned off etc.) gets deleted from the list (Final Office Action, page 4).

In addition, claim 13 states “removing the address of the station from the list if one of the plurality of access points computes the RSSI value of the management message above the first RSSI threshold”. Since the deletion of the entry from the list is based on a period of time of inactivity in Dietrich rather than a RSSI value being above the first RSSI threshold, Dietrich fails to disclose this element of the claim.

Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 13 and 15-17 under 35 U.S.C. §103(a) as being unpatentable over Dietrich in view of Cameron.

Elections/Restrictions

The Examiner has withdrawn newly submitted claims 21-25 from consideration as being directed to a non-elected invention.

Conclusion

Applicant respectfully requests that the Examiner reconsider the rejections and issue a timely Notice of Allowance.

Respectfully submitted,

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